

AUG 14 2007

Doc Code: AP.PRE.REQ

PTO/SB/33 (07-05)

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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<b>PRE-APPEAL BRIEF REQUEST FOR REVIEW</b>		Docket Number (Optional)	
		60246-223; 10692	
<b>CERTIFICATE OF FACSIMILE</b> I hereby certify that this Pre-Appeal Brief Request For Review and Notice of Appeal are being facsimile transmitted to (571) 273-8300. on <u>August 14, 2007</u> Signature <u>Laura Combs</u>	Application Number	Filed	
	10/736,922	12/16/2003	
Typed or printed name <u>Laura Combs</u>	First Named Inventor		
	Wei	Art Unit	Examiner
	17543	Mayekar, Kishor	

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

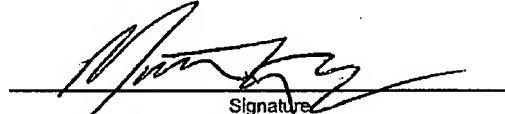
This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

- applicant/inventor.
- assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)
- attorney or agent of record.  
Registration number 53,154
- attorney or agent acting under 37 CFR 1.34.  
Registration number if acting under 37 CFR 1.34 \_\_\_\_\_



Signature

Matthew L. Koziarz

Typed or printed name

248-988-8360

Telephone number

August 14, 2007

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.  
Submit multiple forms if more than one signature is required, see below\*.

<input type="checkbox"/>	*Total of _____ forms are submitted.
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This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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AUG 14 2007

004/008

Serial No. 10/736,922  
60246-223; 10692IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Wei  
Serial No.: 10/736,922  
Filed: December 16, 2003  
Group Art Unit: 1753  
Examiner: Mayekar, Kishor  
Title: BIFUNCTIONAL LAYERED PHOTOCATALYST/THERMOCATALYST FOR IMPROVING INDOOR AIR QUALITY

Commissioner for Patents  
P.O. Box 1450  
Alexandria VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Dear Sir:

In response to the final Office Action mailed on 14 May 2007, Applicant respectfully submits a Pre-Appeal Brief Request for Review. This Request is filed with a Notice of Appeal. As will be explained in further detail, the Review is requested for the reasons set forth below:

- I. Claim 47 is improperly rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.
- II. Claim 47 is improperly rejected under 35 U.S.C. §112, second paragraph, as being indefinite.
- III. Certain rejections under 35 U.S.C. §103(a) do not establish any motivation or reason for modifying the base reference.

Serial No. 10/736,922  
60246-223; 10692**I. Rejection of Claim 47 Under §112, First Paragraph**

The Examiner argues that the subject matter of claim 47 comprises new matter that has no support in the specification as originally filed. Appellant previously pointed out in the response dated 13 July 2007 that Figures 7-10 of the application suggest multiple honeycomb substrates, and that Figure 5 and paragraph 63 of the application suggest the structure recited in claim 47. More specifically, Figure 5 and paragraph 63 of the application disclose a honeycomb 28 having a layer 44 of metal/titanium dioxide or metal compound/titanium dioxide applied on the surface 54 of the honeycomb 28 and a layer 46 of titanium dioxide or metal compound/titanium dioxide applied on an adjacent surface portion 54 of the honeycomb 28. Additionally, Figures 7-10 of the application suggest using multiple honeycombs. Thus, Figure 5 in combination with Figures 7-10 provides support for claim 47 that at least one of the honeycomb structures as illustrated in Figures 7-10 could include the example honeycomb structure as illustrated in Figure 5. For this reason, there is support for the limitations of claim 47, and the rejection should be withdrawn.

**II. Rejection of Claim 47 Under §112, Second Paragraph**

The test for indefiniteness is whether the claim defines the patentable subject matter with a reasonable degree of particularity and distinctness. The requirement to "distinctly" claim means that the claim must have a meaning discernable to one of ordinary skill in the art. Only when a claim is insolubly ambiguous is it indefinite. *Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 71 USPQ2d 1081, 1089 (Fed. Cir. 2004).

The Examiner appears to find claim 47 to be confusing. However, whether the Examiner is confused is not the proper test for indefiniteness test under §112, second paragraph. The proper test is whether the claim has a discernable meaning to one of ordinary skill in the art, which it does. The Examiner has not explained how claim 47 fails to have any discernible meaning under §112, second paragraph. Indeed, as shown in Figure 5 and as described in paragraph 62 of the application, one of ordinary skill in the art could reasonably understand claim 47 to mean that the third layer is a coating that is located on the second surface portion. Thus, claim 47 is not indefinite, and the rejection should be withdrawn.

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### III. Rejections Under §103(a)

There are numerous rejections under §103(a) that are listed below. As will be described, certain rejections do not establish any motivation and are therefore improper.

#### A. Claims 1-14, 17, 18, 34, 36, 45, and 46

Claims 1-14, 17, 18, 34, 36, 45, and 46 were rejected under 103(a) as being unpatentable over Kobayashi. The Examiner argues that the claimed features would have been an obvious matter of design choice. Whether one of ordinary skill in the art could rearrange the layers of the cited reference to meet the terms of the claim as a matter of design choice is not by itself sufficient to support obviousness. There must be a motivation to make the changes to the cited reference (MPEP 2144.04(VI)(C)), which is not included in the rejection. Therefore, the rejection does not establish *prima facie* obviousness and should be withdrawn.

#### B. Rejection of Claim 35

Claim 35 was rejected as being unpatentable over Kobayashi in view of Reisfeld. The Examiner apparently argues that it would be obvious to use a honeycomb structure as in Reisfeld as a substrate for the photocatalyst system of Kobayashi because “the selection of any known equivalent substrates for the photocatalytic fluid purification would be within the level of ordinary skill in the art.” Whether or not the claimed limitations are known in the art does not alleviate the burden on the Examiner of providing motivation for making the proposed combination. There must be some articulated reasoning that would prompt one of ordinary skill to combine the cited references as proposed. The rejection does not provide any reasoning or motivation for combining the references. For this reason, the rejection is improper and the rejection should be withdrawn.

#### C. Claims 7-12, 20, 33, 37, 38, 43, and 44

Claims 7-12, 20, 33, 37, 38, 43, and 44 were rejected as being unpatentable over Kobayashi in view of Reisfeld. Regarding claim 20, the Examiner admits that Kobayashi does not disclose the recited container and argues that it would have been obvious to include the container of Reisfeld in Kobayashi because “this would result in the application of Kobayashi’s photocatalytic material to a photocatalytic fluid purification system.” Respectfully, Appellant disagrees with the rejection because the statement that “this would result in the application of Kobayashi’s photocatalytic

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material to a photocatalytic fluid purification system" is a structure that the Examiner hopes to achieve by making the proposed combination rather than a reason that would cause one of ordinary skill to combine the references. Therefore, the rejection does not establish proper motivation and should be withdrawn.

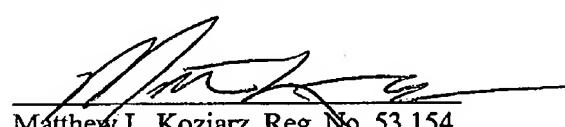
D. Claim 27 and 47

Claims 21-32, 39-42, and 47 were rejected as being unpatentable over Reisfeld in view of Kobayashi. Regarding claim 27, the Examiner argues that Kobayashi discloses all of the layers and that through random rearrangement of the layers, one of ordinary skill in the art would be able to provide the claimed arrangement. Mere rearrangement without motivation to arrange the layers in the claimed arrangement is not sufficient to establish *prima facie* obviousness. For this reason, the rejection does not establish proper motivation and should be withdrawn.

Regarding claim 47, the Examiner argues that the claimed features would have been an obvious matter of design choice since Applicant has not disclosed that the claimed arrangement is for any particular purpose. There is no burden on Applicant to do so. However, the Examiner does have a burden of providing a motivation to modify Kobayashi to meet the limitations of claim 47, which is missing from the rejection. For this reason, the rejection does not establish proper motivation and should be withdrawn.

Applicant believes that no additional fees are necessary, however, the Commissioner is authorized to charge Deposit Account No. 03-0835 in the name of Carrier Corporation for any additional fees or credit the account for any overpayment.

Respectfully submitted,



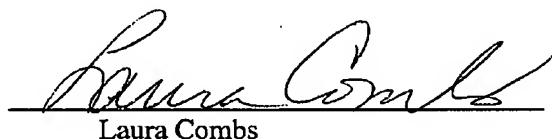
Matthew L. Koziarz, Reg. No. 53,154  
Carlson, Gaskey & Olds  
400 W. Maple Road, Ste. 350  
Birmingham, MI 48009  
(248) 988-8360

Dated: August 14, 2007

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60246-223; 10692

CERTIFICATE OF TRANSMISSION UNDER 37 CFR 1.8

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, fax number (571) 273-8300, on August 14, 2007.



Laura Combs